

REMARKS

Claims 1, 3-6, 9, 11 and 13 are pending in this application. By this Amendment, claims 1 and 3 are amended, claims 2, 8 and 10 are canceled, and claim 13 is added. Support for the amendments to claim 1 can be found, for example, in the specification as filed at page 4, lines 21-22, page 6, lines 14-17, page 7, lines 1-5, page 8, lines 10-15, and claims 2 and 3. Support for new claim 13 can be found, for example, in the specification as filed at page 7, lines 1-5. No new matter has been added.

Applicant appreciates the courtesies shown to Applicant's representative by Examiner Jackson in the November 18, 2008, interview. Applicant's separate record of the substance of the interview is incorporated into the following remarks.

I. Rejections Under 35 U.S.C. §103(a)

A. Taniguchi

The Office Action rejects claims 1-6 and 8-11 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 7,033,675 ("Taniguchi"). Applicant respectfully traverses this rejection.

Taniguchi specifically discloses that PEI according to formula A-1 (PEI-1) is preferable to PEI of formula A-2 (PEI-2), noting preferable electronic interaction between molecules and beneficial crystallization properties. Taniguchi, column 4, lines 23-36. Taniguchi further uses PEI-2 as a comparative example to PEI-1 in the disclosed Examples to illustrate the benefits of the preferential use of PEI-1. Taniguchi, Table 1. Thus, Taniguchi effectively teaches away from creating films comprising PEI-2 resin.

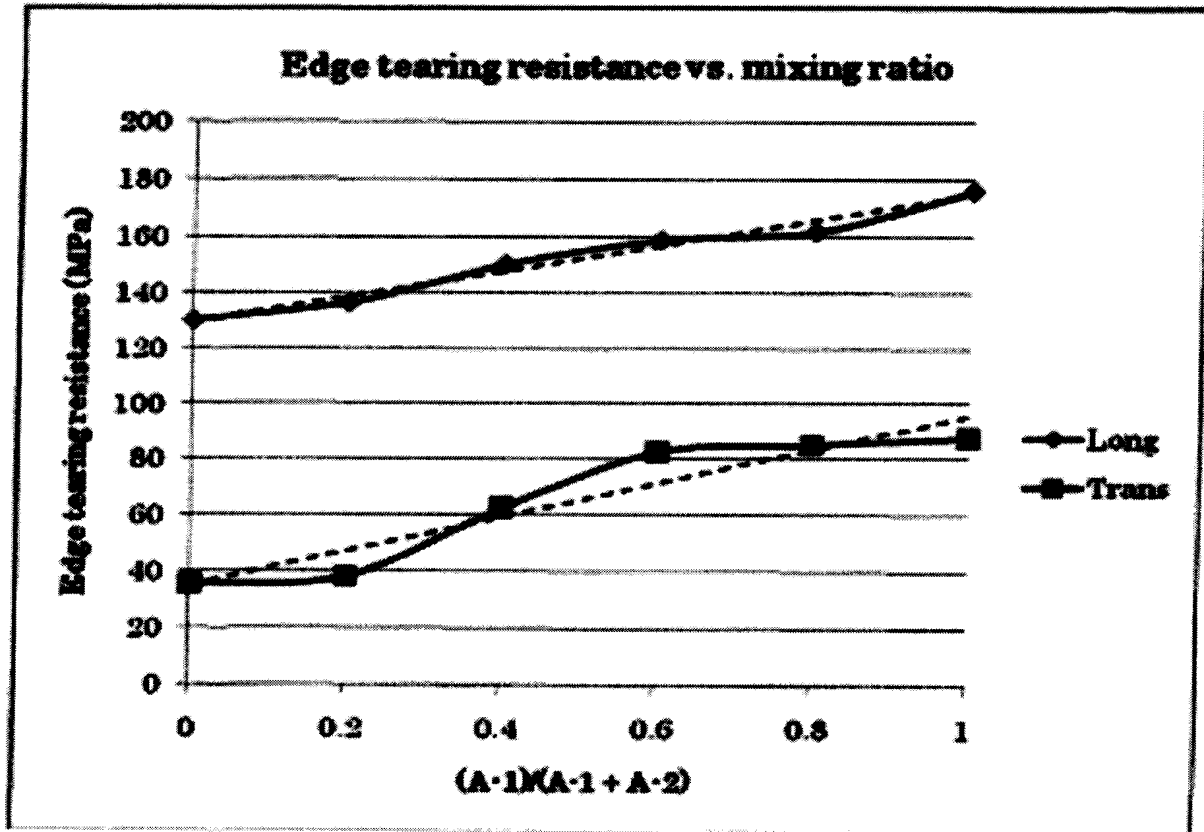
Taniguchi further fails to specifically disclose a film comprising two PEI resins present in a weight ratio range of from 70/30 to 50/50, as recited in claim 1. Additionally, Taniguchi fails to provide reason or rationale for one having ordinary skill in the art to have created a film having the specific mixture range of PEI resins recited in claim 1. Thus,

claim 1 would not have been rendered obvious by Taniguchi for at least this additional reason.

Taniguchi Table 1 summarizes Examples 1-3 and Comparative Examples 1-3, each disclosing only a single PEI used in combination with PAK. The disclosed ratio ranges of PEI to PAK vary from 70/30 to 30/70, but provide no reason or rationale for one having ordinary skill in the art to have created a composition having a mixture of two PEI components.

In addition, the PEI resin weight ratio range from 70/30 to 50/50, as recited in claim 1, provides unexpected results over Taniguchi. Table 1 of the specification as filed, in the graph below with data points included from the attached Rule 132 Declaration, shows an unexpected improvement in film edge tearing resistance across the weight ratio range of from 70/30 to 50/50 for (A-1) and (A-2) recited in claim 1. In the graph below, "long" stands for longitudinal, "trans" for transversal, and $(A-1)/(A-1+A-2)$ is a weight ratio of (A-1) to a total weight of (A-1) and (A-2).*

* $(A-1)/(A-1+A-2)$ is the same as the ratio of (A-1) to (A-2).



The Examiner alleged in the August 20, 2008 Office Action, at paragraph 8, and again in the November 18, 2008, Examiner Interview, that the curve of the transversal edge tearing resistance line of the graph was misleading, alleging too few experimental data points to confirm the unexpected improvements in the $\frac{(A-1)}{(A-1+A-2)}$ value range of 0.5 to 0.7.

The attached Declaration under 37 C.F.R. §1.132 shows the results of additional testing at $\frac{(A-1)}{(A-1+A-2)}$ values of 0.4 and 0.8, and clearly confirms the curve of the transversal edge tearing resistance line above to be accurate.

As shown in the graph above and in the attached Declaration, when the mixing ratio of the PEI resin components is from 70/30 to 50/50 as recited in claim 1 (reflected in the graph at $\frac{(A-1)}{(A-1+A-2)}$ values of 0.5 to 0.7), edge tearing resistance unexpectedly improves

significantly, particularly in the transversal direction. Such improvement, particularly in the transversal direction, is unexpected. It is evident by comparison of the edge tearing resistance in the longitudinal direction with that in the transversal direction that there is an increase in edge tearing resistance in the transversal direction outside that expected from a mere linear increase, when the weight ratio of (A-1) to (A-2) is from 70/30 to 50/50.

Further, comparison of the least square fit line (shown as a hash mark in the graph) for the transversal edge tearing resistance value with the actual transversal edge tearing resistance value shows that the transversal edge tearing resistance value improves much more than expected over the claimed (A-1) to (A-2) ratio range. Particularly, comparison of the edge tearing resistance in the transversal direction to the least square fit line of the transversal data in the ratio range of 70/30 to 50/50 shows a clear increase in the transversal edge tearing resistance value over the range recited in claim 1. Thus, it is clear that the film recited in claim 1 exhibits unexpected transversal edge tearing resistance across the recited weight ratio range of 70/30 to 50/50.

As discussed above, Taniguchi teaches that PEI-1 used alone is far preferable to PEI-2 alone. Taniguchi column 4, lines 23-36. In this manner, Taniguchi teaches away from a film comprising PEI-2. However, Table 1 of the present specification as filed reveals that when a film comprising only PEI-1, as disclosed by Taniguchi, was created, it exhibited blistering when subjected to a soldering heat resistance after pressure cooking test. However, films comprising a mixture of PEI-1 and PEI-2, in an A-1 to A-2 weight ratio range as recited in claim 1, passed the same test. Clearly, therefore, the film recited in claim 1, with a PEI-1 to PEI-2 range of 70/30 to 50/50, is unexpectedly superior to the films of Taniguchi having only PEI-1.

Taniguchi fails to provide any reason or rationale for one having ordinary skill in the art to have created a film comprising two PEI components having a weight ratio range of from 70/30 to 50/50 as recited in claim 1, and fails to indicate the unexpected results clearly illustrated in the graph above and in the attached Rule 132 Declaration achieved by the combination in the recited ratio.

Therefore, Taniguchi fails to render obvious claims 1 and 3-6. Accordingly, withdrawal of the rejection based on Taniguchi is respectfully requested.

B. JP '436

The Office Action rejects claims 1-6 and 8-11 under 35 U.S.C. §103(a) as allegedly being unpatentable over JP 2002-144436 ("JP '436"). Applicant respectfully traverses this rejection.

JP '436 discloses a film comprising 50-80% PEI resin and 20-50% PAK resin (JP '436, paragraph [0011]). JP '436 describes a satisfactory film comprising a single PEI resin and a PAK resin, unlike the film having two PEI resins and a PAK resin as recited in claim 1. As discussed above, improved film edge tearing resistance is found in the (A-1) to (A-2) weight ratio range of 70/30 to 50/50, as recited in claim 1, but does not extend to films having weight ratios where only one PEI resin is present. Additionally, like Taniguchi, JP '436 fails to provide any reason or rationale for one having ordinary skill in the art to have created a film having the (A-1) to (A-2) weight ratio range of 70/30 to 50/50, as recited in claim 1. Therefore, JP '436 also fails to render obvious claims 1 and 3-6.


Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) based upon JP '436 is respectfully requested.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 3-6, 9, 11 and 13 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Rule §1.132 Declaration

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